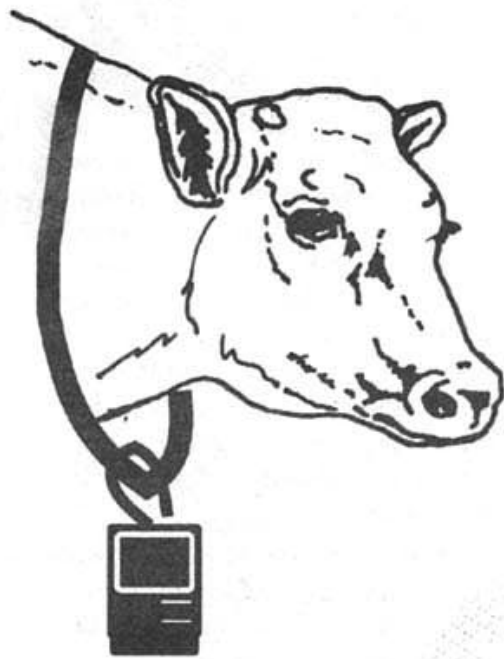


## From Cows to Computers Vet School Promotes Computer-Assisted Learning



by Catherine Curran, Information Technology Publications

Dr. George Cardinet's message to fellow veterinarians is simple — information technology is changing the way we teach and practice medicine.

At a joint session of the American Association of Veterinary Medical Colleges and the American Association of Veterinary Anatomists this summer on campus, Cardinet showed his colleagues how computer networking promotes collaboration and shared resources.

"Each school is no longer a monopoly," Cardinet said. "Information technology makes it possible for us to share resources through a variety of mechanisms."

Cardinet illustrated his point with an

online tour of the Veterinary Medicine Education Network (VETNET). He took his audience to a World Wide Web site at Oklahoma State University, called up faculty teaching materials used by veterinarians at North Carolina State University, and opened a Canine Osteology program created by his colleague at Davis, Dr. Janine B. Kasper.

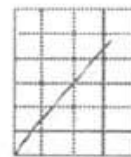
As Associate Dean of Academic Programs, Cardinet is describing the development of a distributed computing environment at UCD's School of Veterinary Medicine. His vision calls for a fully networked environment with computers in the classrooms and a curriculum that promotes the use of online resources. Here is a look at the components of the vet school program.

• **How-to Instruction:** All first-year

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### Account Watch

The number of new computing accounts registered with I.T.'s new account facility this fall is up more than 40 percent over last year. Between Sept. 11 and Nov. 5 of this year, I.T. statistics show **6,215** new accounts registered. That compares with **4,409** new accounts registered for all of fall quarter last year. Statistics from I.T.'s Distributed Computing Analysis and Support group show **29,818** I.T. computer accounts registered on campus.



### Quotables

"And what about the stunning revolution in information technology? How can we use this dazzling capacity to best advantage in the education of our undergraduates? These new pathways to learning must never, will never, replace faculty. But they can make faculty more accessible to students. They do not necessarily narrow horizons to the video screen; in fact they can take the student through the screen, outside the classroom to the farthest corners of the geographical and intellectual map."

Chancellor Larry N. Vanderhoef  
Inaugural Address  
September 28, 1994

## Listprocessor Goes to Work on Campus From Law Librarians to Economists, E-mail Application Attracts Many

by Bonnie Johnston, Information Technology Publications

Need to know why it's traditional to dress boys in blue and girls in pink? The percentage of the Russian Federation's gross domestic product spent on defense this year? How to say "Happy Birthday" in Swahili? If you subscribe to STUMPERS-L, a mailing list devoted to answering obscure and difficult-to-research questions, then you already know the answers to these questions.

STUMPERS-L was established to help reference librarians and other researchers who frequently field questions with answers that are difficult to find using traditional search methods. This list demonstrates the greatest benefit of a mailing list: STUMPERS-L allows members to easily and quickly draw on a large pool of expert knowledge and reference materials — in spite of the fact that its participants are scattered throughout the world.

Of course, you may not want to go to the trouble of wading through the 15 to 50 postings generated by STUMPERS-L just to find out which soccer player scored the most goals in a World Cup game. Does this mean lists like STUMPERS-L are useless to you? Not at all — even though you are not subscribed to a list, you may still be able to take advantage of the wealth of information its members have generated in the past. Many mailing lists automatically archive past discussions, which you can search by sending e-mail to the server containing a search command and keywords (even if you are not a list member).

How do mailing lists get established? Many are started by one or two individuals who need information that is not readily available to them, and who see the potential resource created by quick and easy communication with a large number of people in the same position. UCD's law-lib list began this way: Al Lewis, now retired from UCD's law library,

had been communicating with a few colleagues in San Francisco via e-mail, and convinced them to participate in an e-mail bulletin board, which he set up with the help of Elizabeth St. Goar.

"Word spread, and pretty soon more and more law librarians heard about it and wanted to join," says Judy Janes, who now maintains the law-lib list. "I took over in 1992, and we've since moved on to listproc software — and are thinking about newsgroups."

Dave Zavatson of Information Technology, UCD's Postmaster, helped Janes move the list over to Listprocessor in January of 1994. "It came about because the LAW-LIB list became such an enormous time commitment, adding and removing people from an alias file," explained Zavatson. "We wanted the list to be archived, and for those archives to be retrievable in some automated fashion. And we wanted people to be able to add and remove themselves automatically. Listprocessor let us do all that — it worked so well that we moved all the aliases over to Listprocessor mailing lists. Since January we have well over 250 lists."

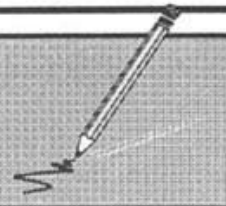
What does it take to start up your own list? "We have some general guidelines," says Dave Zavatson. "Essentially, it has to support some kind of university function, so it needs to be supporting staff, or a class, or some kind of research topic." Zavatson adds that these guidelines are flexible: "If your list is something that really doesn't support one particular department but it's beneficial to the whole university system, there's no problem with that. Sometimes people will have really good ideas that will serve the whole Internet community — like the

*Continued on Page 6*

## I.T. Offices Relocate in Academic Surge

Several groups that mesh together to form the Division of Information Technology are converging in the new Academic Surge building. Associate Vice Chancellor for Information Technology Carole Barone, Distributed Computing Analysis and Support (DCAS), Advanced Networked and Science Applications (ANSA), Information Technology Publications, and members of the Campus Access Point, and Instructional Services are now located in Academic Surge. Information Technology's Planning, Strategy and Administration soon will follow.

## Letters



## Would the Real Gopher Please Come Out?

Dear Editor:

Some time ago the *I.T. Times* carried an article on Gopher with an illustration of some kind of a rat (which I presumed was as much as a Californian would know of rodents).

Needless to say, as a gopher graduate (alumnus of the University of Minnesota), I was dismayed!

The gopher of Minnesota fame is really a 13-striped ground squirrel. Today, thanks to the UM Alumni Association, I have an authentic, cartoonized, nearly real gopher.

Sincerely,  
Bob Campbell  
Professor Emeritus  
Plant Pathology  
rcampbell@ucdavis.edu

Letters are welcome. Please mail them to IT-Publications/PSA, or send e-mail to [itpubs@ucdavis.edu](mailto:itpubs@ucdavis.edu). All letters are subject to editing.

## Educate America Act Is on the Internet

The Educate America Act, signed into law by President Clinton, is available on the Internet in the U.S. Department of Education's online library, along with research reports, fact sheets, education statistics, and references to other Internet resources. The library can be accessed by Gopher, pointing the client to [gopher.ed.gov](http://gopher.ed.gov); through World Wide Web (WWW), using the resource locator <http://www.ed.gov/>; or by anonymous ftp at the address [ftp.ed.gov](ftp://ftp.ed.gov). (from *Educom review*)

## Courses Build Computing Skills

The Division of Information Technology in partnership with Staff Development offers a full range of electronic communication courses. The two- to three-hour workshops give hands-on practice using the tools you need to investigate the wealth of information accessible through the Internet. Courses cover many topics including the following: Electronic Communication for the Novice, Eudora, Internet Tools, Remote Access Tools, Listserv Administration, and World Wide Web Server Administration. For further information call 754-8091 or send e-mail to [learnit@ucdavis.edu](mailto:learnit@ucdavis.edu).

# The Insider

Dealing with events and issues facing the Division of Information Technology, today *The Insider* introduces the I.T. Directors and the changes they face.

## Directors Discuss Changes We Face

How do we keep pace with the ever-changing world of information technology and maintain a baseline service that meets the expectations of the campus community?

This is a question the Division of Information Technology must ask itself on a regular basis. And it is a question for which the answer constantly changes.

The realization that access to the Internet (Information Highway) is essential to success in the academic community has many people turning to Information Technology for answers. Once a luxury, the computer now is a necessity; we expect it to get us where we want to go.

In today's issue of the *I.T. Times* we meet the people responsible for re-evaluating and reshaping I.T. services so they remain in sync with campus needs and desires. Working directly under Associate Vice Chancellor Carole Barone, these men and women oversee everything from the central e-mail processor to the Apple Repair Service.

**Russ Hobby**  
Director, Advanced Networked and Scientific Applications (ANSA) and Technology Resources

An active member of the Internet Engineering Task Force, an international organization that sets the standards for the Internet, Hobby is devoted to advancing the use of networked applications for teaching and research. Lately, Hobby has been wearing three hats on campus — director of ANSA, director of Technology Resources and technical director of the Network 21 project.

"Our role in ANSA is to investigate new technologies, test them and bring them to campus," says Hobby. "Initially, we work with a small group interested in applying the technology; however, the technologies we introduce are ones that will have broad use on campus over time." One example is the Geographic Information Systems. "This started as a small group project which has grown to cover many disciplines," says Hobby.

Hobby also serves as director of Technology Resources, which provides Apple Repair Service, workstation support and auxiliary equipment. "We have decided that these services can be delivered more efficiently by combining them with other areas of our I.T. organization," says Hobby. He has worked with a variety of campus groups to determine the best way to restructure the delivery of those services.

As technical director of Network 21 project, Hobby balances the coexistence

of new technologies and established technologies. For instance, 10BASE-T to the desktop is an established, cost-effective technology. However, the Network 21 backbone will use ATM (Asynchronous Transfer Mode), a new technology that will transmit data at high-speeds between buildings. The ATM technology is vital to the project, says Hobby, because "we are getting a lot more people who use a lot more bandwidth. It's the aggregate of all those people who cause the need for higher bandwidth on the backbone."

**Doug Hartline**  
Executive Assistant to the Vice Chancellor and Director, I.T. Planning, Strategy and Administration

Besides keeping the administrative wheels of the organization turning, Hartline serves as the Project Director for the Network 21 project, overseeing numerous teams of talented staff that will be responsible for its implementation. Hartline has also spent the last year chairing an Information Technology Outreach Program Task Force that is responsible for defining a multi-level, multi-faceted blueprint for campuswide information technology education and technology support. Once implemented it is envisioned that this program will greatly enhance the campus's effectiveness in the use of information technologies. In effect, Hartline says, "the program will provide the coordination and economies of scale of a centralized support structure, but the flexibility and responsiveness of a decentralized support team."

Hartline also is a member of the systemwide Technical Acquisition Support Advisory Committee, which works to ensure the procurement of cost-effective software and hardware agreements for the University.

**Lois Unger**  
Director, Center for Creative Communication Services

What do printed documents, educational videos and multimedia computer-based learning programs have in common? The Center for Creative Communication Services and its director, Lois J. Unger.

Before advances in digital technology led to integration of graphics, text, and video, campus customers went to three separate departments for three very different products or services. Now Illustration Services, Instructional Media and Repro Graphics are all one team. The newly formed Creative Communication Services runs a high-tech, service-oriented shop.

"To meet our customers' expectations, we are constantly channeling our energies toward extensive and in-depth technical training and service," says Unger, who directed Repro Graphics from its beginnings to a fully computerized operation.

Digital files can be imported via the campus network to a variety of publishing systems. Currently, The Center for

Creative Communication Services offers the following: binding, copyright services, copy services, distance learning, design services, equipment loan, equipment repair, framing and matting, hypermedia applications, illustrations, instructional graphics, mail merging, media engineering, media production, microfiche, printing, photography, playback centers, poster sessions, syllabi production, and video conferencing.

**Richard S. Kaye**  
Director, Communications Resources

Don't let the old red telephone booth fool you. Plenty of high-tech changes are happening inside the Telecommunications Building. And Dick Kaye is right in the middle of them. Before the establishment of Information Technology in October 1992, Communications Resources' (formerly Telecommunications) primary mission was providing campuswide telephone and telecommunications services. With the creation of I.T., Communications Resources took on the added responsibility of operating and maintaining all campus data networking services.

"Making the transition to Network 21 as smooth as possible is our primary goal right now," says Kaye, who believes this new infrastructure will create tremendous opportunities.

"With the emergence and maturity of network capabilities, the business of the university will be conducted electronically as such functions as purchasing go online," Kaye says. "For years, people have come to depend on the telephone as an absolutely essential service. In the years ahead, access to the data network will become just as urgent in the day-to-day conduct of business."

**Joan Gargano**  
Director, Distributed Computing Analysis and Support (DCAS)

The growth in networking and client-server architecture spurred the formation of I.T.'s Distributed Computing Analysis and Support (DCAS) group. "Two years ago, we didn't even exist," says director Joan Gargano, whose role is to facilitate access to and use of network resources.

People expect electronic communication and online services to come right to their desktops. This means that many of the services that once were provided by a centralized computer — such as security and knowing how to find and access computer-related resources — have to be provided in new ways in the networked environment.

"Our job is to make sure these new services are available and reliable. Providing these services in a networked environment is a lot more challenging than providing them in a mainframe world and requires doing things in completely new ways," says Gargano. "Considering the exciting ways this new way of computing can



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Dr. Richard Field's career is highlighted by his work in the development of the Regional Computer Center concept in the north of England.

## A View from Abroad

# Libraries and Computing Team to Create New World of Information

by Kenneth Firestein, Data Services Librarian, General Library

On August 25 members of the University community heard a talk titled: "The Convergence of Libraries and Computing Centers in the UK" by Dr. Richard Field. The idea of bringing together Libraries and Computing Services is an idea that develops at numerous institutions in various ways. These two parts of the University Community work together naturally in

many ways and bring to each other skills and resources that support and enhance each other. The successful development of both library and computing services has many positive ramifications for the teaching and research tasks of the whole University.

Dr. Field recently assumed the position of Vice-Principal of the University of Edinburgh with responsibilities for Academic Services, including Computing Services (both Academic and MIS),

the Library, and Audio Visual Services. He has had a career highlighted by his work in the development of the Regional Computer Center concept in the north of England. He was Director of the University of London's Computer Center which became one of three national super-computer centers; he was part of a World Bank project in China; and he has spent time at UC's own Lawrence Livermore National Laboratory where his investigations included looking at future trends in massively parallel systems.

Dr. Field has formal responsibility for developing the University of Edinburgh's Information Strategy — and in his travels he is seeking examples and ideas for this strategy. The University of Edinburgh is one of the largest in the United Kingdom. It was started in 1583 and today has 16,600 students and 2,700 staff. Dr. Field noted that the Library at the University of Edinburgh was started in 1580, three years earlier! Computing Services started a bit later — in 1966.

In the UK several reports were published in 1993 to guide the future development of the libraries. One was the Libraries Review Group Report by Brian Follet (the Follet Report). A subcommittee report by John Fieldon is very important and another report by Bryan Coles dealt with issues specifically related to science, technology, and medicine.

The key report is the Follet Report, which has a vision of a "new information world" with virtual libraries and perhaps, virtual librarians. But the vision seen is not thought to be one that will actually happen. Instead a set of

*Continued on Page 8*

# This Year's UCACS Conference

by Paul Schneeman, Advanced Networked and Scientific Applications

Things are happening very rapidly in the area of information technology, and it is easy to forget that some things that appear very new are in fact recycled from times past. Likewise, problems confronting us locally are often shared by others.

With this perspective, I drove to the University of California Academic Computing Symposium (UCACS), which was held this September in Berkeley, at the Clark Kerr Campus extension. (The Clark Kerr extension is in the old California School for the Deaf, which relocated in the South Bay region, giving Berkeley a splendid special events location).

The UCACS conference was first held in 1983, when a new computing consultant at UC Santa Cruz, Dr. Jim Mulherin, was confronted with a software support issue and asked, "Well, what are the other campuses doing about this?"

The conference has grown each year from a handful of kindred souls to over 90 this year. Originally called "the ACS" (Academic Computing Symposium), its name was expanded to UCACS several years ago to widen the audience within the UC system. The symposium is now supported in part by the UC Office of the President, and attracts people from a variety of disciplines and services in the UC system. The most notable increase is from the library staff, although Cliff Lynch, Director of Library Automation, has been a long-time participant.

UC Davis has sponsored the event three times in the past 12 years. As the

principal coordinator twice, and as an attendee for nearly all of the conferences, I offer this viewpoint.

Although computing as an academic activity has become commonplace, many issues have yet to be resolved. Consider these examples:

- Jack McCredie, the Vice Chancellor of Information Technology and Computing at UC Berkeley said \$120 million has been spent connecting 20,000 workstations on the Berkeley campus. However, due to the perceived unsafe nature of the campus at night and the lower cost of housing away from Berkeley, the biggest demand now is for off-campus connections.

- Clifford Lynch noted the growing dilemma of a computer-accessible library that differentially provides online access to journal articles. Articles that can be accessed directly online represent a small and selective set of the scholarly works available, Lynch said. He noted that adding full text to journal databases introduces bias in citation because the full text articles are cited more frequently. Journals published in the popular media are more often available online than those published in small scholarly journals.

- An active group organized by the Office of the President is responsible for organizing and financing relevant software. Jim Dolgan announced that



Apple, Ftp (Inc), DEC, SAS, SyBase, SUN, Microsoft, and Maple are part of the UCOP site-license agreement. While conference participants all expressed the need for the economic benefits of site-licensed software, opinions varied in a discussion regarding the best way to distribute current and future site-license agreements.

- John Gage, a principal at SUN systems and a former co-worker at UCB pointed out that the importance of the mouse and desktop concepts familiar today were generally overlooked when presented in the 1960s, over 25 years ago. It is likely, he claims and I agree, that the really lasting technology of today is being equally overlooked yet could be right under our noses.

For instance, he pointed to the variety of worlds one can enter through the World Wide Web. In today's computing world, the opportunities made possible by the World Wide Web are attracting a diverse computing public that is willing to spend the time creating even newer virtual worlds.

Although this can seem to be an act of creating virtual "content", it may prove to be a driving force in the development of future network applications.

Even though the online information being accessed today may not paint a complete picture, the thirst for that information is insatiable and our image of what is real changes daily.

When we began these conferences 12 years ago our big question was, "How do we get people at the university to appreciate the need for computing?"

Now the question is, "How do we satisfy a seemingly insatiable need?"



## Digital Camera Is on View

CAIT's Corner will keep you informed of new hardware and software available for evaluation at the Center for Advanced Information Technology. A joint project of the General Library and the Division of Information Technology, the CAIT is located on the first floor of Shields Library. Hours are 9 a.m. - noon and 1 - 4 p.m., Monday through Friday. If you have comments or suggestions or would like to make an appointment, call 752-5711 or send e-mail to [advancedit@ucdavis.edu](mailto:advancedit@ucdavis.edu).

### New Hardware Arrivals

- **Apple Quick Take 100 Digital Camera:** When teamed with the appropriate software, this camera allows you to take photographs and store them directly on your hard disk. You then can convert the photos into the desired digital format (e.g. tiff, pict) and import them into printed and electronic publications.

- **Indy Workstation:** If you are looking for a graphics machine, you may be interested in testing the Indy Workstation. Technology found in the Indy Workstation created special effects for such movies as Jurassic Park and Terminator 2. With 64 megabytes of memory and 24 bit graphics, this is a machine for those interested in all sorts of multimedia applications.

- **IBM Thinkpad:** This is your traveling multimedia machine. This 486 computer is equipped with a CD-ROM, built-in speaker and color monitor. What's more, it's as easy to carry as a briefcase.

### New Software Under Review

- **Statistical Software:** Programs that allow you to do everything from analyze data to plot 3-D visualization charts are available for evaluation. Packages include Transform, Dicer, SPSS, Sigma Suite, JMP, and Statistica to name a few.

- **Remote Communications:** Anyone who has been in a meeting and wanted to pull information from an office computer can appreciate the value of remote communication software programs. Remote communication software can turn your laptop computer into a portable extension of your office workstation. Programs available for review include PCAnywhere, Close-Up, and Reach Out Remote Control.

- **Internet Tools:** Many new programs designed specifically for accessing information on the Internet are entering the marketplace. In addition to many shareware programs, titles for review in the CAIT include Netscape, Spyglass, and TCP Connect2.

### Looking Ahead

In the months to come, you can look forward to testing the Power PC. Both Apple and IBM will be releasing new machines built upon this new computer architecture. We also expect to see Apple's new cross-platform machine that features a built-in 66 megahertz DX/2.

What else is coming? Windows NTAS, Windows 95, Warp (OS2.3) and software...software...software!



## Network News

• **White House Handbook:** The White House now has an interactive, multimedia, electronic citizens' handbook on the White House, including a virtual tour of the White House, detailed information about Cabinet-level and independent agencies, a subject-searchable index of federal information and publications, and a map of Washington, D.C. The URL is: <http://www.whitehouse.gov>

• **Virtual Libraries Get a Boost:** The federal government has pledged \$24 million toward digitizing materials in university libraries. The four-year grants will go to Carnegie Mellon, Stanford, UC Berkeley, UC San Francisco, University of Illinois, and University of Michigan. The project marks the largest commitment to date to constructing "virtual libraries" on the Internet. (*Chronicle of Higher Education* 10/5/94 A26)

• **The Doctor Is Online:** Physicians are increasingly turning to online medical databases to diagnose tough cases and stay on top of new medical



developments. A study of more than 450 Medline searches found the service helped doctors in saving lives and curing ailments, avoiding unnecessary procedures and helping

patients in disputes with insurance companies. Another report found Medline searches led to significantly lower costs and shorter hospital stays. Currently, only about 20% of practicing doctors are online. (*Wall Street Journal* 10/7/94 B1)

• **More High-tech Medicine:** Federal support for telemedicine will top \$85 million in 1994, and states are starting to ante up. Georgia is spending \$10 million to link 60 sites via videoconferencing, and Oklahoma's 38-site project will cost \$4.3 million. Altogether 20 states have telemedical projects underway. The hope is that by investing in high-tech medicine, the nation can reduce annual health-care costs by \$36 billion, or 3% of this year's estimated health bill, according to Arthur D. Little, Inc. (*Business Week* 10/3/94 p.117)

• **Jostling for Cyberspace:** It's getting crowded online, and is likely to become more so, as the 80% of U.S. households that own PCs but do not subscribe to an online service start getting connected. (*Business Week* 11/7/94 p.134)

• **Online Auction:** According to Internet historians, the Computer Museum in Boston hosted the Internet's first online auction in April 1994. The Museum is the world's first institution devoted to people and computers. For info send mail to: [computer\\_info@tcm.org](mailto:computer_info@tcm.org), with "Request" in subject line, and "Send help instructions" in the body of the message.

• **Kindernet:** An MIT study predicts the median age of Internet users will drop from 26 to 15 within the next five years. (*Bottom Line Personal* 10/15/94 p.10)

• **Internet Yellow Pages:** Osborne/McGraw-Hill has published the

The M-Bone's Connected to...

# Program Puts Multimedia, Network Conferencing Tools at Your Fingertips

by Catherine Curran, Information Technology Publications

When Russ Hobby logs on to his computer, he is never sure whom he will meet. Take the time a group of Australian scientists sang "happy birthday" to his one-year-old daughter, Lystra.

"I went into the directory to see what conferences were listed and ended up video conferencing with a group at the University of Queensland in Australia," said Hobby, director of Information Technology's Advanced Networked and Scientific Applications.

"It was shortly after five-thirty on a Thursday evening, but it was already Friday morning in Australia," Hobby said. "My daughter, who was turning one on Friday, came to my office during the conference. When they learned it was her birthday in Australian time, they sang."

The chain of events was inspired by the Multicast Backbone — M-Bone for short. M-Bone is a multimedia networking program Hobby helped develop through his work with the Internet Engineering Task Force. One of the goals of the task force is to develop Internet application standards. Work on the standards identified the need to do conferencing on the

## APPLICATIONS



## AWARENESS

Internet, so members of the task force teamed efforts to create M-Bone.

"With global communications, scheduling conferences across time zones is a challenge," says Hobby. "When we (Internet Engineering Task Force) have our meetings, it's hard to get both the Europeans and Australians on at the same time."

By combining audio, video, and a whiteboard, M-Bone serves as an international conferencing tool. M-Bone's audio-video features allow you to engage in face-to-face conversations over the network in real time. You can also send a copy of the window appearing on your workstation over the network so others can see the applications you are running.

M-Bone's whiteboard feature al-

lows you to share text and graphics. You can draw diagrams on the whiteboard to illustrate a point, and you can place an entire report on the whiteboard for review and discussion.

M-Bone's scheduling tool allows you to post events and see who else is logged on to the multicast network. This is the tool Hobby used to connect to Australia, and it is the tool he uses to check in with NASA's Mission Control when the space shuttle is up.

With M-Bone, you also can adjust the speed of your transmission — how many video frames appear on your screen in a second — by adjusting the amount of bandwidth you use. Because of limited bandwidth capabilities across the Internet, images appear jerky on the screen. However, once the Internet gets faster, the problem will be solved.

Currently M-Bone is available for Unix-type workstations, but Hobby says it could be converted to run on PCs and Macs.

Hobby sees people using M-Bone for brainstorming sessions, meetings of geographically scattered professional groups, and distance learning. M-Bone is now in its infancy, and like many other programs, Hobby expects its uses to grow in proportion to the number of users.

## Online Information Guides Network Users to Available Services

Answers to questions about computer networking are now available online through the Network Administrator Resources program (NAR).

The NAR service offers information on the following:

- Answers to frequently asked technical questions;
- Descriptions of services provided by Information Technology;
- Announcements of classes and computing demonstrations;
- Mailing lists;
- Information about how to obtain networking software;
- Instructional opportunities;
- Computing presentations.

Answers to frequently asked technical questions are posted on the Campuswide Information System (CWIS). Using gopher follow these paths:

*The Campus/Using Computers on Campus; Information Technology/ Frequently Asked Computing Questions/ UCD Net; NAR Resources & Information/*

Descriptions of services provided by the Division of Information Technology — including names of those to contact for further information, costs, and cross-references to related services — are indexed by keyword and posted on both the CWIS and the World Wide Web (WWW).

To access on the CWIS, using gopher follow these paths:

*The Campus/Using Computers on Campus; Information Technology/ IT Services for Network Administrators/*

To access through the World Wide Web:

1. Click on *Mosaic* icon and pull down file menu
2. Select *Open URL*
3. Type <http://www.ucdavis.edu/IT/NAR/ServicesCatalog.html>

Network Administrator is the term

Information Technology uses to describe the person who makes sure a department's computer networks are up and running. The term describes a function, not a job title. The Network Administrator serves as a link to Information Technology, providing a direct point of contact for technicians, programmers and others who provide service to campus departments.

To have your name added to the list of Network Administrators, please send e-mail to [dkstevens@ucdavis.edu](mailto:dkstevens@ucdavis.edu).

## U.S. Geological Survey Offers New Internet Service

Have you ever wondered about why there so much oil in Texas, but not in Wisconsin? What are the deepest canyons in the United States? (The answer might surprise you!) While the answers to many of these questions might be as close as an encyclopedia, some questions are difficult to answer without checking many sources.

The U.S. Geological Survey now offers a new, experimental Internet service — Ask-A-Geologist. All electronic mail to Ask-A-Geologist will be routed to the geologist of the day. The geologist will reply to your

question within a day or two, or provide referrals to better sources of information. All questions and answers will be part of the public record.

Send e-mail to [ask-a-geologist@octopus.wr.usgs.gov](mailto:ask-a-geologist@octopus.wr.usgs.gov).

If you have any questions about this service, but not about geology, please contact the system administrator - Rex Sanders at [rex@octopus.wr.usgs.gov](mailto:rex@octopus.wr.usgs.gov).

Information in this article is based on work by the Info Scout, Susan Calcari, and supported by the National Science Foundation.

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# A Community Partnership Networking, Distance Learning, and Telecommuting All in One Package

by Vicki Suter, Distributed Computing Analysis and Support

In these budget-tight times, how can UC Davis fulfill its diverse missions of teaching, research, and public service while keeping on top of the dizzying developments in information network technology, finding new ways to provide distance education, and promoting collaboration between the university, community colleges, and K-12 education? Now imagine there was a way to accomplish all that while also fighting air pollution. That seemingly improbable collection of goals is precisely what the innovative research contract between the Division of Information Technology and the California Department of Transportation (CALTRANS) is designed to accomplish.

The UCD-CALTRANS Davis Community Network, Telecommuting and Distance Education Project benefits everyone involved. With the formation of the Davis Community Network (DCN), Davis residents are gaining access to a wide range of online services: e-mail, conferencing, public forums, local community bulletin boards, and global information networks, along with the training necessary to become self-reliant information technology users. The goals of the Department of Transportation — as well as the well-being of the public at large —

The project team will test desktop video conferencing equipment and software in a pilot teaching project.

are served by the telecommuting component of the plan, with its potential for cutting down traffic congestion and improving air quality.

The university benefits from the chance to have a joint group of I.T. personnel, including the DCN-CALTRANS project team and staffers from the Information Technology Campus Access Point (I.T.-CAP) and the Center for Advanced Information Technology (CAIT), test a wide range of new electronic communication and Internet tools. With the help of community volunteers, these groups pass along the benefit of their experience to faculty, staff and students.

At the same time, the contract sets up research agreements between the Division of Information Technology and a number of private vendors that allow the campus to pilot test ISDN and wireless connectivity without making risky capital investments in potentially unstable new technologies. These agreements formalize and extend I.T.'s informal practice of using loaner equipment for testing and evaluation, in that the new agreements have a longer (two-year) term and provide the opportunity to test in a real-world context, rather than in an evaluation lab. The results of these pilot tests will help I.T.

extend the high-speed connectivity of Network 21 off campus and facilitate access to higher-end technologies.

In addition, the contract has helped forge new collaborative links between the university, the California Community Colleges Chancellor's Office, and the K-12 education sector that will not only help coordinate network planning and problem-solving in general, but in particular will help foster new approaches to providing distance education. This year the DCN-CALTRANS project team will work with technical and educational staff from the contract partners to test desktop video conferencing equipment and software in a pilot teaching project. The group plans to develop a

full "curricular toolkit" of electronic communication tools and to rigorously evaluate how these tools might affect curricular development and learning.

All of which demonstrates a point — that the university's research, teaching, and public service goals are not mutually exclusive and need not necessarily compete for ever-shrinking resources. Creative solutions like the UCD-Caltrans research project can serve the public and community service mission of the university while reaping significant benefits for the campus and, in this case, allowing the university to fully participate in the fast-moving world of electronic communications technology.

## Presentations Focus on Network Applications

Networking was a popular topic at Computer Fest '94. "Information Highwaymen" Ken Weiss and Steve Faith took participants on a brown-bag journey of the World Wide Web. As programmer/analysts for I.T.'s Distributed Computing Analysis and Support group, Weiss and Faith assist campus faculty and staff with the development of networked applications.

Kevin Harrington, pictured with a piece of broadband cable, prepped his audience on how to plan for a network that will serve current and future needs. Through his work with I.T.'s Communications Resources, Harrington helps departments plan and install Local Area Networks.

Others from Information Technology presented seminars as well. Katie Stevens of the I.T.-Campus Access Point demonstrated the Eudora e-mail program. Russ Hobby, director of Advanced Networked and Scientific Applications, introduced his audience to the Multicast Backbone — a multimedia network conferencing tool.

Sponsored by the Division of Information Technology and the UCD Bookstore, Computer Fest '94 took place in October.



Ken Weiss (left) and Steve Faith



Kevin Harrington

## Network Difficulties? Call the NOC

Those experiencing network difficulties are encouraged to contact the Network Operations Center (NOC). Located in I.T.'s Communications Resources building, the NOC provides extended client support in the evenings and early morning. The center accepts trouble reports during the following days and hours:

- Sunday:** 3 p.m. to midnight
- Monday - Thursday:** 7 a.m. to midnight
- Friday:** 7 a.m. to 4 p.m.

To report a network difficulty call 752-7656. When placing a trouble call, be sure to include the following information:

- Your name;
- Return phone number;
- Where you are located (i.e., building & room number);
- The nature of your problem.

You may also contact the Network Operations Center via e-mail. Send e-mail to [itnetop@ucdavis.edu](mailto:itnetop@ucdavis.edu).



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Internet Yellow Pages, by Harley Hahn and Rick Stout. The book provides users with reference information useful when searching the Internet. It contains more than 2,400 free Internet resources, an annotated list of Usenet newsgroups, and definitions and hints about posted information. Price: 27.95 + \$5.00 shipping. Contact: Osborne McGraw-Hill at 800-227-0900. (from *Educom Review*)

• **Happy Birthday to the Internet:** Twenty-five years ago the Internet began with the creation of ARPANet, funded by the Department of Defense's Advanced Research Project Agency. Vint Cerf, president of the Internet Society and one of the people who participated in that ARPA project, says: "You don't know how far you've come until you stop and look back." (*Newsweek* 7/8/94 p.56)

• **WWW Over E-mail:** CERN, the European research group that developed the World-Wide Web, now makes it possible for people to get Web pages via e-mail. Send a message to [listproc@wwwo.cern.ch](mailto:listproc@wwwo.cern.ch) and in the body of the message type the Universal Resource Locator for the Web page you want. (*Chronicle of Higher Education* 9/21/94 A25)

• **Client-Server for Less:** A survey of 305 information systems managers by Business Research Group shows client-server systems costing an average of 8% less than original mainframe systems. More than half of the respondents say they're saving an average of 29% on client-server systems, while 19% say costs have increased. (*Information Week* 9/19/94 p.22)

• **A Virtual Library of Congress:** The Library of Congress is planning to create a virtual library of digitized images of its collections of books, manuscripts, photos, etc., for transmittal over computer networks. A Digital Library Coordinating Committee will seek private and industry donations in addition to appropriations from Congress. The goal will be to convert the "most important" materials by the year 2000. (*New York Times* 9/12/94 B1)

• **E-Forms at Your Fingertips:** Companies with more than 500 employees typically spend between \$94 billion and \$120 billion per year on some 1,210 different paper forms. Fortunately, electronic forms — accessed, filled out, and filed online — are making a dent in the paper chase, and BIS Strategic Decisions predicts a 118% increase in the average number of e-forms processed each month between 1993 and 1996 (compared with 4% for paper). (*Information Week* 8/8/94 p.42)

Items appearing in this column were gleaned from *Edupage*, a summary of news provided as a service by EDUCOM — a consortium of leading colleges and universities seeking to transform education through the use of information technology.



# Listprocessor Goes to Work on Campus

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law library mailing list — and we'll set up lists like that too."

## Law Library List

The LAW-LIB list, which has more than 1,800 subscribers, is unmoderated. Subscribers can join and leave the group at will, post questions when they have them, and respond to others' questions publicly if the answer is of general interest, or via private e-mail if it is not.

"They use the list to locate obscure legal materials — foreign and domestic, to share information, to help law librarians who are geographically isolated to stay connected, to post job openings, to make announcements, to discuss problems, and to survey the group when they need collective input," says Janes.

Because LAW-LIB is both large and very active, Janes spends 3 to 4 hours a week maintaining the list, in spite of the fact that the group's unmoderated status keeps her workload to a minimum. "My duties are basically focused on keeping the bounced mail in line, and answering direct questions about the list from subscribers. You've got to monitor it daily to catch any problems."

Although moderated lists may require greater participation from their owners, they can be ideal for sending essential information to small but widely-scattered groups of people (department faculty, task force or committee members). Using a mailing list to distribute important information like meeting agendas and administrative directives can save time (e-mail arrives in minutes, where campus mail takes at least a day), as well as paper, toner, and wear-and-tear on the department printer, copier, and fax machine.

## Office of Administration

Janet Hamilton, in the Office of Administration, relies on her own list to communicate with sixty-plus department managers, supervisors, program directors, and staff members.

"Virtually everything we distribute to this group is distributed via my list, which is used by me, or other members of my immediate staff, several times a week, Hamilton says. "Everyone knows to look for these communications, and this is the primary way they receive information from me." In addition, Hamilton's list is concealed, preventing non-members from obtaining the list name and posting inappropriate material to the list.

Hamilton's unit has found e-mail distribution to be big cost-saver. "During the last and most extensive budget reduction process, I reduced the Vice Chancellor's own operating budget by 39%," she says. At the same time, Hamilton's unit merged with the facilities organization, doubling the number of people that she would have to communicate with. "The administrative staff in my immediate office would be hard-pressed to handle communications within the organization by traditional means," states Hamilton.

Hamilton is ready to expand her e-mail usage. "We are in the process of implementing a pilot project which may be extended to the entire campus," Hamilton says. "Beginning this month, all Office of Administration's official di-

# Choosing a List That's Right for You

Here are the top three reasons people give for not using a listprocessor:

1. I don't know how.
2. I don't have time.
3. What's a listprocessor?

If you know how to read and answer e-mail, then you already have the basic skills you need to take advantage of UCD's list processor. Listprocessor distributes all messages via e-mail, and all Listprocessor commands can be issued by sending an e-mail message to [listproc@ucdavis.edu](mailto:listproc@ucdavis.edu) with a blank subject line and the command in the body of the e-mail.

## Setting up a List

The initial setup for a list involves nothing more than a phone call to UCD Postmaster Dave Zavatson, and a few minutes to e-mail your list of subscribers to listproc. Once your list has been created, the amount of time you spend maintaining it can vary widely, depending on the kind of list you want to establish. You can control your time investment in the list with the options that you choose during the initial setup.

## Choosing the Right List for You

Listprocessor is a program that auto-

mates the maintenance and use of large mailing lists. Mailing lists can be set up either for one-way dissemination of information to a large group of people (much in the same way that interdepartmental memos are currently used), or as a discussion group targeted towards a specific audience or topic.

There are three types of lists available to UCD faculty, staff, and students:

**1. Unmoderated lists** are easiest to maintain: many listowners of unmoderated lists never have to do anything to the list beyond the initial setup. Individual members are responsible for subscribing or unsubscribing themselves to your list, and they post their own messages directly to the listprocessor for distribution.

**2. Subscription-moderated lists** require a small time investment from the listowner, but they do allow you, as the owner, to control who has access to your list. Individual members can still post their own messages directly to the list, but when they attempt to subscribe to the list, listproc automatically forwards the subscription request to you. You must then de-

cide whether or not to allow the individual to subscribe, and then manually add the subscriber to the list. Subscription-moderated lists might be worth the time investment if your list is devoted to a closed group, like a committee or a class.

**3. Moderated lists** can be very time-consuming for the listowner, but they give you complete control over both the membership and content of your list. As with subscription-moderated lists, you will receive all subscription requests to your list. In addition, every message sent to the list by members will be forwarded to you for approval — you must manually post each message to the list. A moderated list is probably not feasible if your audience is large and is likely to generate a high volume of messages on a daily basis. However, because of the control that a moderated list allows, this type of list may be ideal for disseminating "official" information to a specific audience.

Unsure which type of list might be best for you — or even whether a mailing list is appropriate? For more information, contact Dave Zavatson by e-mail at [list-request@ucdavis.edu](mailto:list-request@ucdavis.edu), or by phone at 752-7758.

rectives will be distributed to my units via my list. They will receive no hard copies. If this works well, it is possible that all campus directives will be distributed exclusively through e-mail at some point in the future."

## Agricultural Economics

"I'll never teach a class without e-mail again, so long as it's universally available to the students," states Lawrence Shepard of Agricultural Economics. Shepard, who teaches classes in personal finance and investment, incorporated e-mail into his AGE 143 class last Spring quarter and is now an enthusiastic proponent of e-mail in the classroom. "It leveraged my time, allowing me to be a more effective instructor and a more efficient faculty member in a time when we are all trying to do more with fewer resources," he says.

About three weeks before the end of the Winter quarter, Shepard used the preliminary roster for AGE 143 to write a short note to his students, letting them know what they might expect from the class. Shepard feels this initial contact allowed him to establish an early rapport with class members. "When you lecture to 300 students, you're scouring your brain to find ways to make it a personal experience," says Shepard. "On the first day of class, I'd already corresponded with about two-thirds of my students — they knew I was excited about the course."

Shepard required his students to sign up for a computing account within the first two weeks of the class, and he made learning to read and send e-mail a part of the homework by incorporating I.T. Quick Tip publications into his course syllabus. He was then able to distribute class assignments, homework assignments, answers to problem sets, optional readings, and information

about class projects via the class mailing list.

"The students talked to each other as well as to me. For example, if you were a student who was trying to tout a certain stock on our stock market game, then you could send it to the whole class, and everyone saw the same piece of mail," Shepard says. Rumors swept through the simulated stock market daily, adding realism and insight into how real financial markets work, and how they fail.

While Shepard agrees that the savings in class materials (handouts, homework corrections, etc.) was significant, he feels that the most important thing that e-mail saved him was time.

"This quarter I felt like I finally had time to do something I've been wanting to do for maybe ten years: to have weekly career counseling sessions," Shepard says. "A lot of students come into my class — senior students who are business-oriented — and they're asking a lot of the same career questions, and expressing many of the same uncertainties. We ended up filling the conference room by my office every Wednesday afternoon, from 5 to 7 — students benefitted from hearing other students express anxieties that they themselves are entertaining. We could take the time to do this kind of thing because the factual questions from the course were being answered more efficiently via e-mail and in the electronic office hours."

Electronic office hours? Yes — in conjunction with the class mailing list, Shepard also utilized Internet Chat Relay (IRC) software to hold online office hours for his students, in addition to his regular hours. "On Tuesday and Thursday nights at 9:30, students found me on a channel that we called #invest," he says. Students were encouraged to log on to discuss the class material, the stock market game, or even real-world investments that they might have an interest in. "It's far more efficient to do it with 25 people at once,

rather than one at a time — and the shy person who might not raise a hand in the back of a lecture hall filled with 300 students might be very comfortable doing it at a keyboard under a pseudonym."

Student response to the combination of electronic and traditional teaching methods was "fantastic," says Shepard. "Participation was nearly universal. The common comment on evaluations was 'I thought I was going to hate e-mail, but I'm really glad you made us learn to use it.' And a lot of them said 'He's the most accessible professor I've ever had' — but I'm not any more accessible than I was before except by virtue of e-mail."

Shepard had no experience with a mailing list before he tried it in class last spring. "You don't have to have experience," he says. "I just communicated with Dave Zavatson, and he told me how to do it. That's the best part — you don't have to be an expert." Shepard also took advantage of the computer expertise his students already possessed — he asked for a volunteer to serve as class postmaster — a student who was already familiar with e-mail and could also help others who had problems. "Students are often ahead of faculty when it comes to electronic communication."

Enthusiastic about the results of his first attempt at incorporating electronic communication into his class, Shepard intends to use this same format for all of his future classes. He stresses the personal touch that e-mail allowed him to bring to his students. "It doesn't make a class of three hundred like a class of fifteen, but it does make a class of three hundred like a class of fifty," he says. "You get to know a significant number of the people — not just by name, but by their personal qualities, their sense of humor, and their means of expression. It enhances those things that draw professors to teaching."

If you are interested in learning more about setting up a mailing list — for a class, department, or other group — contact Dave Zavatson by e-mail at [list-request@ucdavis.edu](mailto:list-request@ucdavis.edu), or by phone at 752-7758.

"I'll never teach a class without e-mail again."

## The Insider

Continued from Page 2

be used — the expanded access to information and types of tools that are available, for instance — we think our work is well worth the effort."

DCAS is always interested in hearing from the campus about new client/server applications under development and the types of services that are needed. Send e-mail to [dcas@ucdavis.edu](mailto:dcas@ucdavis.edu). DCAS provides descriptions of its current work through the World Wide Web.

**Lana Moffitt**  
Director, Information Resources

Perhaps Lana Moffitt sums up the feelings of many who deal with constant change when she says, "you can never do as much as you want to do as well as you want to do it."



As director of Information Resources, Moffitt oversees a diverse repository of campus computing resources, ranging from UCD's central computing systems to the Center for Advanced Information Technology (CAIT). The campus computing labs, the Campus Access Point (I.T.-CAP), instruction and applications development also fall under the Information Resources umbrella.

"The growth in computing and network capabilities is placing an increased demand on all I.T. services," says Moffitt, "and our goal is to give the campus the methods it needs to access computing resources in the easiest way possible." To fulfill that goal, Information Resources seeks to develop applications that present information in ways that are most useful for the users of those systems. The emphasis is on the information, rather than the technology. An example of this is the simplified version of the Student Information System database, which is available for query purposes. Campus departmental staff use desktop software to extract and format data. Although the process to create this ability required sophisticated technical skills, it can be used effectively after only a brief training period.

Information Resources also constantly looks for ways to improve service delivery. This quarter the central computing systems were improved by the addition of new hardware and upgrades of the operating systems. "This effort resulted in the ability to handle a 100% increase in the number of simultaneous users," says Moffitt.

"The growth in the need for central computing services can only be called explosive. That this growth was matched by the capacity of the systems speaks well of the staff involved in the upgrades," she says, and reflectively adds, "we accept change as a constant and, in most instances, actually enjoy the opportunities it provides."



Dr. Janine B. Kasper demonstrates an educational software program developed by the School of Veterinary Medicine.

## Vet School Promotes Computer-Assisted Learning

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vet med students are required to take an "Informatics" course that teaches them how to do Medline searches, go online into the Health Sciences Library and use e-mail. For one class assignment, students must use on-line resources to produce a bibliography on a topic.

• **World Wide Web** The School of Veterinary Medicine has a home page on the World Wide Web (<http://vmgopher.ucdavis.edu>). Developed by

Randy Buechner, contents include the following: faculty biographies, course descriptions and samples of educational software produced by vet med faculty.

• **Educational Software:** Faculty are actively involved in developing educational software. Often called courseware, these programs provide learning opportunities not found in textbooks — or under the microscope. Dr. Kasper, who participates in the development of many programs, says the vet school has an

## Interactive Software Entices Students

*Editor's Note: Many departments are using educational software to supplement classroom teaching. The Division of Information Technology provides consultation on the development of interactive software programs. Call 752-0218.*

Faculty at the School of Veterinary Medicine have developed educational software programs on a variety of subjects. The programs support classroom teaching and research. Faculty who incorporate the computer programs into their curriculum cite many benefits, including the following:

• The programs are interactive. Unlike textbooks that display only linear drawings, computer graphics create a 3-dimensional effect. Many programs have built-in quizzes, allowing students to test their knowledge. A beep sounds when an incorrect answer is given, alerting the student to go back and review the material.

• The programs preserve images, so students can review material more than once. For example, a program used to teach hematology displays images of different cell types that students can call-up on the screen to study. In some instances, students are able to view on computer an unusual situation they might not have an opportunity to see under the microscope.

• The programs encourage collaboration. It is not unusual to see a group of students huddled around a computer screen discussing a problem posed in a program.

Here is a brief look at just a few of the educational software programs developed by the School of Veterinary Medicine:

• **Canine Osteology:** Developed by Dr. Janine B. Kasper, Dr. George Cardinet, and David Magliano, this program combines text and graphics. It is used to teach osteology to first year students. Canine Osteology was the first educational software program marketed by the School of

Veterinary Medicine. The School has a demonstration disk it sends out for review.

• **Spud:** Developed by Dr. Dwight C. Hirst, a microbiologist, this is one of several case studies used as an "open-book" midterm examination for second-year veterinary students in microbiology.

• **Canine Radiographic Anatomy:** Dr. William J. Hornoff and John Doval are developing a series of programs used to teach radiological science. One program in the series simulates x-rays seen on film to teach students how to get the exposure needed to make a diagnosis.

• **Interactive Laboratory Instruction in Veterinary Hematology:** Dr. Nemi C. Jain uses this program to teach comparative hematology. Students view images of abnormalities in leukocytes and bone marrow. A "control screen" displays images of normal data, giving students a point of comparison.

• **Computer Assimilated Case Management and Decision Making:** Dr. Gerald V. Ling, associate director of the Small Animal Clinic, incorporated 20 cases in various stages of completion into this program. The program gives students an opportunity to start clinical synthesis before their fourth year. The case-management program provides practice in us-

agreement allowing students to obtain software developed by the school for personal use. The school also is obtaining copyrights to its programs. (See *Interactive Software* article that appears below.)

• **CALF:** This is the acronym for the Computer-Assisted Learning Facility. Located in Haring Hall, the CALF facilitates the use and development of educational software. It serves as both a teaching and research lab. Dr. Kasper is Program Coordinator of the CALF, and the School of Veterinary Medicine also employs a multimedia computer programmer, Rick Hayes, who participates in the development of new programs for Macintosh platforms. CALF personnel distribute the programs to classrooms.

"I think the programs are encouraging the students to work in groups," says Dr. Kasper. "This is good practice for the real world," she says. "When you are in a practice situation you want to confer with colleagues."

• **Online Classes:** The school recognizes that some subjects can be taught online. For instance, students enrolled in "Hospital Practices" see one video a week. They then have three to four weeks to take a computerized quiz based on the videotape. The quizzes are scored on computer, and the results go into a folder on computer.

• **Computer Centers:** Computer labs are being set up in classrooms and other areas throughout the school, so students will be able to take quizzes and examinations on computer. The computation of results will be computerized, providing instructors with useful information.

ing VMTH forms and practice in problem-based case formats.

• **Use of Digital Images in General Pathology:** Dr. Dennis Wilson says this program is a very useful laboratory teaching aid. Because students like to study clinical cases, Wilson incorporates the images into a case-based format.

• **Clinical Simulations:** This program is designed to teach students the problem-solving skills needed to practice veterinary medicine. While Dr. Donald Strombeck developed this test-based program for students, he says it also is appropriate for use by private practitioners. Students make decisions based on the patient profiles presented on computer.

• **Parasitology:** A color atlas of parasites of domestic and non-domestic animals, Parasitology was Developed by Robin Houston in collaboration with Drs. Walter Boyce and Patricia Conrad to support classroom instruction in parasitology. The program was initially conceived by George McKay, a veterinary student (Class '95) to facilitate his studies of parasitology.

For further information on these and other educational software programs developed by the School of Veterinary Medicine, contact the Computer Assisted Learning Facility (CALF) at 752-2477.

## Program Provides Discounts on Microsoft Products

Information Technology is pleased to announce the University of California, Davis is participating in the Microsoft Select Volume Purchase Program. The University of California Office of the President (UCOP) awarded Wareforce the contract. As a result of the agreement, Wareforce will be acting as the distributor for

Microsoft products.

The Select Volume Purchase Program enables campus faculty and staff to purchase selected Microsoft products for University use at a discount. For further information, contact the I.T.-Campus Access Point at 752-2548 or send e-mail to [ithelp@ucdavis.edu](mailto:ithelp@ucdavis.edu).



## Computer Chat

by Karen M. Munoz, Information Resources

Computer Chat answers some of the most frequently asked computing questions. Any question you would like to have addressed in this column can be directed to 754-8302 or sent by e-mail to [itpubs@ucdavis.edu](mailto:itpubs@ucdavis.edu).

Those of you who walked through Shields Library at the beginning of Fall Quarter and saw the line at the I.T.-Campus Access Point (I.T.-CAP) Walk-in Facility, won't be surprised when I tell you this has been the busiest Fall Quarter on record for those of us in Information Technology. Between Sept. 26 and Nov. 11, the I.T.-CAP Walk-in Facility helped more than 8,670 people.

Half of the traffic resulted from password related issues such as password expirations and clients forgetting either their passwords or computer accounts. Hopefully, the new password checking program, which does not require clients to change their passwords as frequently, will decrease the percentage of password expiration problems.

If you have ever had a campus computer account, I.T.-CAP can look up your record and issue a new password. The password will be activated the following day. Your old password cannot be recovered unless you remember it because the information is electronically encrypted. I.T.-CAP hours are Monday -Thursday 8 a.m. - 7 p.m. and Friday 8 a.m. - 6 p.m. The better times to come to the CAP are before 10 a.m. or between 5 and 7 p.m.

Today's question looks at another password issue.

**If I have a campus computer account, do I need a separate password to use MELVYL?**

We turned to Beverlee French of the General Library for an answer. For the most part, no. The purpose behind MELVYL passwords is to ensure that the use of MELVYL databases is reserved for the exclusive use of UC students, faculty, and staff for university instruction, research, and patient care. (Use of the MELVYL catalog, on the other hand, is available to any member of the public and never requires a password.) Since your campus computer account certifies you as an authorized university affiliate, you do not need a separate password to use the MELVYL databases. From any of the campus computer labs, for example, where you have entered your EZ, SZ, or FZ account and password, you can access all of the MELVYL databases without a separate password, but you will need a MELVYL password if you want to use the UPDATE command to repeat a search and have the results sent to you. If you are working from your home or office or a lab and you use your campus computer account to log onto MELVYL through one of the campus SUN servers (e.g., Rocky, Bullwinkle, Chip and Dale), or VMS machines (by typing `telnet melvyl.ucop.edu` at the prompt), you do not need a separate password to get into the MELVYL databases, and you can also use the UPDATE command without a MELVYL password. You will need a MELVYL password, however, if you want to connect directly to MELVYL from your home or office without logging on through one of the SUN servers or VMS machines. You can obtain a MELVYL password from any library reference desk by presenting a student registration card or faculty/staff identification. Passwords are good for one year.

# Creating a New Information World

Continued from Page 3

compromises are likely to occur such as:

- Organization Convergencies which are management mergers.
- Operational Convergencies where operations are brought together.

At the University of Edinburgh 50 members of the Computing Center staff, out of a total of 160, have their offices in the Library, thus establishing a relationship. Note that here at UC Davis such a relationship exists, too. At the Shields Library there is now housed the CAIT (Center for Advance Technology) and the CAP (Campus Access Point) which are very important services of Information Technology.

## BANNER Upgrades Will Increase System Security

by Libby Bullock, Information Resources

Two new features are on the horizon for campus BANNER@ users:

- The installation of an upgrade of the BANNER@ system software.
- The implementation of a new password security system.

The new version of the BANNER@ system software is expected to be in place in late November or early December, as soon as all testing is completed.

The changes you experience in using BANNER will depend on how you access the program. Query-screen users will notice a few differences in the appearance

of the screens. Other users will experience changes in two or three function keys. To some users the changes will be transparent.

The new password security system, Enigma Logic Safeword@, is being installed to improve BANNER's password security. This additional security is necessary to ensure that the student data in BANNER@ is protected from unauthorized access. Users will login to Banner using an Enigma Logic token that generates a unique password for each login.

- There is a need for an all-pervasive electronic network that connects people on campus and at home to the world.
- It is easy to see a future where the

equivalent of a Cray computer on a desktop and a library on a desktop can be common. Technology will need to be brought to the desktop. Library holdings will not be the issue but access to library materials will be.

equivalent of a Cray computer on a desktop and a library on a desktop can be common. Technology will need to be brought to the desktop. Library holdings will not be the issue but access to library materials will be.

- We will need trained librarians to use and help others use these information resources and we will need to be trained. Technology will drive us forward but costs will be a problem.
- We need an information audit to help us develop an information strategy.
- Moving graphics to the desktop is important and exciting but the system that can do that is yet to be developed on and off campus. A 'measure' of the speed of transmission might be: a britannica per second!

Many aspects of information storage and dissemination are converging. Electronic transmission of texts and graphics is part of this convergence. Scanning and Optical Character Recognition is part of this, too. Libraries and other collections of information resources currently store valuable data. The organization of resources is a major task that needs a lot more work due to the diversity of the material that can now be handled. Access is the basic issue, and is based on good organization of quality resources with high-speed connections that are universally available. Today we talk a lot about the World Wide Web of information servers and clients of these servers such as Mosaic and Lynx. Bringing these tools together requires a strategy which will serve the needs of our academic community as we enhance our learning, research and teaching.

The talk by Dr. Field was attended by staff from both organizations including Dr. Carole Barone and University Librarian Marilyn Sharrow. We are fortunate here at UC Davis to have continuing cooperation at all levels of the Library and Information Technologies as useful convergencies develop.

## Eudora E-mail Program Available Free of Charge

Due to a university site-license agreement, commercial versions of the Eudora e-mail program are now free to all faculty staff and students.

Eudora runs on both Macintosh and PC/Windows platforms, and it is fully compatible with the campus e-mail system. One of the noted benefits of the program is its document transfer feature. Eudora also allows you to store e-mail messages on your computer's hard disk.

Copies of the Eudora software program are available at the I.T.-Campus Access Point (I.T.-CAP). You may obtain a copy by bringing one high-density disk to the CAP's Walk-in Facility (located in Copy Services on the first floor of Shields Library). You also can download the software from the World Wide Web at <http://www.ucdavis.edu>.

For information call the I.T.-CAP at 752-2548 or send e-mail to [ithelp@ucdavis.edu](mailto:ithelp@ucdavis.edu).

## 1994-95 Campus Directory Is Coming Soon

by Zack O'Donnell, Communications Resources

Communications Resources is making the final preparations for the publishing of the 1994-95 Campus Directory. As we did last year with the opening of the Neuroscience facility in Research Park, this year we pushed back the update process to give campus departments affected by the opening of the Social Science & Humanities facility more time to determine new locations for their staff and faculty.

### New Telephones Placed on Campus

You may have noticed a new kind of single line telephone on the desks of fellow employees. Due to serious technical problems and the inability of the manufacturer to meet supply demands, I.T.'s Communications Resources has moved to a new single line telephone

instrument manufacturer. The new STARPLUS telephones come in both a standard and speakerphone model.

## Publications Are Available Online

Information Technology is posting back issues of the *I.T. Times*, Network 21 Planning Tips, and other publications on the World Wide Web. To access I.T. publications from the World Wide Web using Mosaic, follow these steps:

1. Click on Mosaic icon and pull down File menu.
2. Select Open URL
3. Type <http://www.ucdavis.edu/IT/PSA/publications/itpubs.home.html>
4. Click on the publication you wish to view.

## I.T. TIMES

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